

**APA304Hu01 100µg**

**Active Galectin 4 (GAL4)**

**Organism Species: *Homo sapiens (Human)***

***Instruction manual***

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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1st Edition (Apr, 2016)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Met1~Ile323

**Tags:** N-terminal His-tag

**Purity:** >92%

**Endotoxin Level:** <1.0EU per 1µg (determined by the LAL method).

**Buffer Formulation:** PBS, pH7.4, containing 0.01% SKL, 5% Trehalose.

**Applications:** Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

**Predicted isoelectric point:** 9.0

**Predicted Molecular Mass:** 37.2kDa

**Accurate Molecular Mass:** 36kDa as determined by SDS-PAGE reducing conditions.

## **[ USAGE ]**

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

## **[ STORAGE AND STABILITY ]**

**Storage:** Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

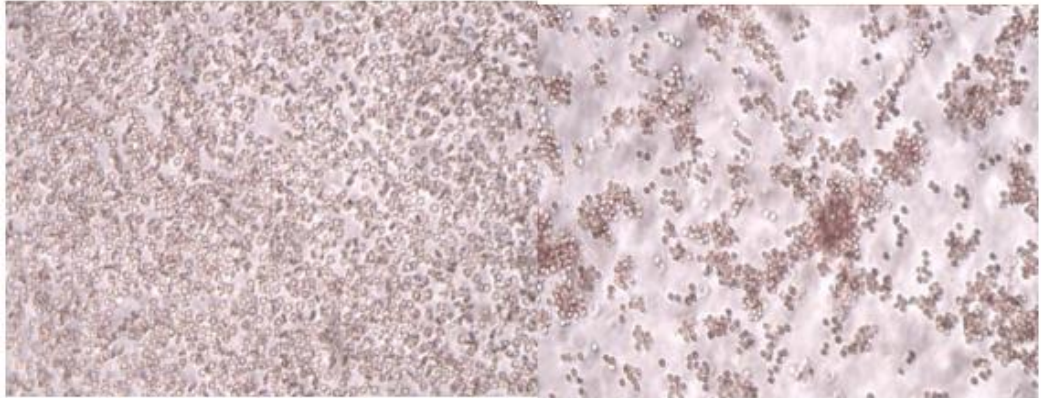
**Stability Test:** The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

## **[ SEQUENCE ]**

MAYVPAQGYQ PTYNPTLPYY QPIPGLNVG MSVYIQGVAS EHMKRFFVNF VVGQDPGSDV  
AFHFNPRFDG WDKVVFNTLQ GGKVGSEERK RSMPFKKGAA FELVIVLAE HYKVVVNGNP  
FYEYGHRLPL QMVTHLQVDG DLQLQSINFI GGQPLRPQGP PMMPPYPGPG HCHQQLNSLP  
TMEGPPTFNP PVPYFGRLQG GLTARRTIII KGYVPPTGKS FAINFKVGSS GDIALHINPR  
MGNGTVVRNS LLNGSWGSEE KKITHNPFPG GQFFDLSIRC GLDRFKVYAN GQHLDFFAHR  
LSAFQRVDTL EIQGDVTL SY VQI

## **[ ACTIVITY ]**

Galectin-4(GAL4) is a protein that in humans is encoded by the LGALS4 gene. The galectins are a family of beta-galactoside-binding proteins implicated in modulating cell-cell and cell-matrix interactions. LGALS4 is an S-type lectin that is strongly underexpressed in colorectal cancer. In this case, we chose rabbit erythrocyte (RaE) to assay its ability of agglutination. A general procedure for hemagglutination assay (or haemagglutination assay; HA) is as follows, two-fold dilute the recombinant human GAL4 with 0.9% sodium chloride injection, add 50µL a serial dilution of GAL4 to each well of a U or V-bottom shaped 96-well microtiter plate. The final well serves as a negative control without GAL4, replace with 50µL 0.9% sodium chloride injection. Then add 50µL 1% rabbit erythrocyte to each well and mixed gently. The plate is incubated for 3 hours at room temperature. The results are shown in Figure 1. It was obvious that the minimal effective concentration of GAL4 is 3.187µg/mL.



A

B<sup>+</sup>

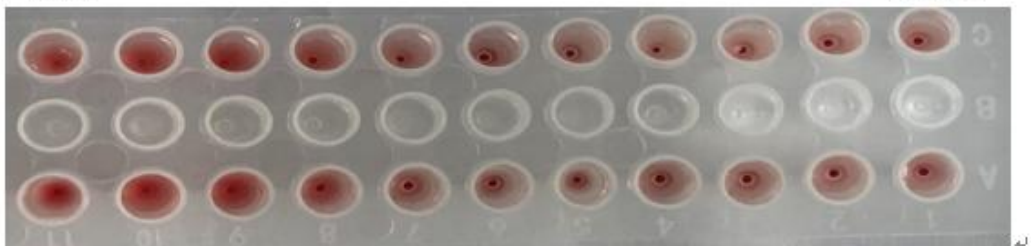
**Figure 1. The hemagglutination of recombinant human GAL4**

(A) Rabbit erythrocyte reacted without GAL4 for 3h;

(B) Rabbit erythrocyte reacted with 7.5µg/ml GAL4 for 3h.

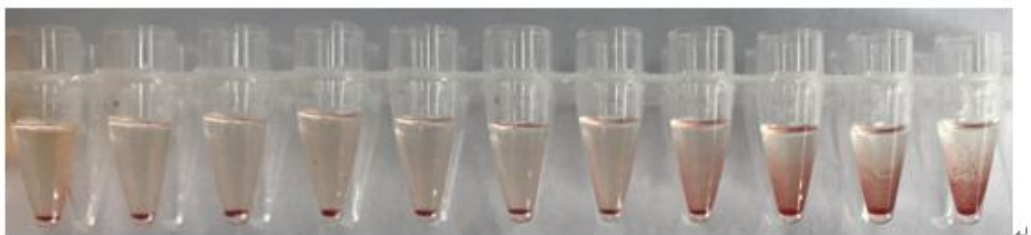
Positive

Negative<sup>+</sup>



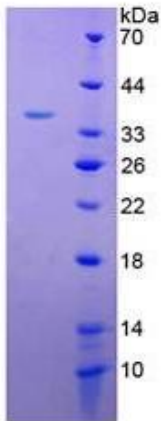
Negative

Positive



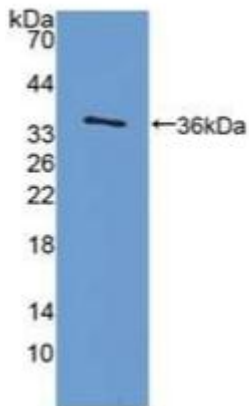
**Figure 2. The hemagglutination assay of GAL4 in V- bottom shaped 96-well microtiter plate.**

**[ IDENTIFICATION ]**



**Figure 3. SDS-PAGE**

Sample: Active recombinant GAL4, Human



**Figure 4. Western Blot**

Sample: Recombinant GAL4, Human;

Antibody: Rabbit Anti- Human GAL4 Ab (PA A304Hu01)

**[ IMPORTANT NOTE ]**

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.